

Staff  
Summary  
Report



To: Mayor & City Council  
Through: City Manager

Agenda Item Number <sup>30</sup>  
Meeting Date: 03/22/01

**SUBJECT:** Settlement and Release Agreement with ExxonMobil Corporation

**PREPARED BY:** Charlotte Benson, Assistant City Attorney (350-2813)

**REVIEWED BY:** C. Brad Woodford, City Attorney (350-8229)

**BRIEF:** Request Council approval and authorization for Mayor to sign settlement agreement negotiated between City and ExxonMobil Corporation.

**COMMENTS:** **LITIGATION SETTLEMENTS (0501-04)** Request Council approval of settlement and release agreement with ExxonMobil settling City's claims for underground storage tank leakage from former Mobil gas station near City of Tempe Well #4.

**Document Name:** (20010322casg01) Supporting Documents: Yes

**SUMMARY:** Underground storage tank leakage at the former Mobil service station at Apache Blvd. and Rural Road made City production well #4 unusable. Negotiated settlement agreement provides for payment from ExxonMobil so the City can construct a new well.

**FISCAL NOTE:** ExxonMobil will pay the City seven hundred fifty thousand dollars (\$750,000.00) to be deposited in a Water Utilities Department CIP fund for construction of a new production well.

**RECOMMENDATION:** Authorize Mayor to sign Settlement and Release Agreement with ExxonMobil Corporation.

## **SETTLEMENT AND RELEASE AGREEMENT**

This Settlement and Release Agreement ("Agreement") is entered into by and between the City of Tempe, an Arizona municipal corporation ("Tempe"), and Mobil Oil Corporation, a New York corporation ("Mobil") and is effective as of the date both parties have signed the Agreement.

### **DEFINITIONS**

The following definitions shall apply to this Agreement:

(a) "Claims" means the claims set forth in Tempe's demand letter, dated September 2, 1999 ("Demand Letter"), relating to Tempe's water production Well No. 4 (a copy of which is attached hereto as Exhibit A and is incorporated herein).

(b) "Subject Property" refers to that certain real property at 904 East Apache Boulevard, Tempe, Arizona.

(c) "Mobil" means Mobil Oil Corporation, its parents, subsidiaries and affiliates, dealers, and their respective stockholders, officers, directors, employees, agents, representatives, corporate predecessors-in-interest, corporate successors-in-interest, assigns, and attorneys.

(d) "Tempe" or "City" means the City of Tempe, its City Council, staff, its municipal corporation successors-in-interest, its assigns, and its attorneys.

(e) "Former Mobil Station" refers to the real property and any improvements formerly located at the Subject Property which formerly was operated as a gasoline service station by or on behalf of Mobil (former Mobil station #18-MEG), including, but not limited to the soil, surface waters, and groundwater of, at, or beneath this property.

(f) "Contamination" means petroleum hydrocarbons and any constituents of fuel (including, but not limited to, benzene, xylene, ethyl benzene, toluene, and methyl tertiary butyl ether (MTBE), diesel, lead, and waste-oil derived contaminants).

### **RECITALS**

A. WHEREAS, Mobil previously operated the Former Mobil Station on the Subject Property;

B. WHEREAS, on or about September 2, 1999, Tempe served the Demand Letter upon Mobil asserting certain Claims;

C. WHEREAS, Tempe's Demand Letter alleges, among other things, that

Contamination alleged to be present in groundwater and soil beneath the Former Mobil Station interferes with Well No. 4, should Tempe use the well under normal operating conditions;

D. WHEREAS, Mobil denies each and every allegation set forth in the Demand Letter, and further alleges that VOC contamination in the westernmost groundwater plume of the South Indian Bend Wash Superfund Site interferes with Tempe's Well No. 4; and

E. WHEREAS, Tempe and Mobil desire to avoid litigation and to resolve the City Claims and any pending disputes between them related to such Claims in a non-adversarial manner, and have agreed to settle and release amicably any and all Claims relating to, arising out of, or that could have been brought in any litigation relating to or arising out of the Claims.

### **TERMS**

NOW, THEREFORE, for good and valuable consideration the receipt and sufficiency of which is hereby acknowledged, the parties agree as follows:

1. **Payment to the City.** Mobil will pay to Tempe the sum of seven hundred fifty thousand dollars (\$750,000), by company check, within thirty (30) days of the date on which the Tempe City Council approves this Agreement and the Mayor executes the Agreement.

2. **General Release.** Tempe hereby releases and forever discharges Mobil from any and all claims, acts, liabilities, damages, demands, grievances, judgments, liens, rights of action and causes of action of any nature whatsoever, whether known or unknown, which Tempe ever had, now has or may in the future have against Mobil (i) arising out of or related to the alleged interference with Well No. 4 by the contamination caused by the former Mobil station; (ii) arising out of or in any way related to the Claims or the facts and allegations set forth in the Demand Letter concerning the contamination caused by the former Mobil station; (iii) arising out of or in any way related to the alleged Contamination beneath and in the vicinity of the Former Mobil Station caused by the former Mobil station; or (iv) which could have been set forth in the Demand Letter from the facts known to date or that could have been brought in any litigation relating to or arising out of the Claims.

3. **Good Faith Compromise.** Execution of this Agreement does not constitute evidence of, and shall not be construed to be an admission of, liability and/or wrongdoing by Tempe and/or Mobil. Rather, this Agreement is a settlement of disputed claims, and Mobil expressly denies any liability to Tempe. This Agreement is entered into between Mobil and Tempe for the sole benefit of the individuals and entities specified or named herein, and is not for the benefit of any other person or entity and no other person or entity shall be entitled to receive, enforce or rely upon this Agreement or the terms of settlement described herein. The parties acknowledge and agree that this Agreement is entered into in good faith and has no purpose other than to compromise, settle, and extinguish the claims referred to herein.

4. **Representations and Warranties.** The parties to this Agreement represent, warrant, and agree as follows:

(a) Each party has received independent legal advice from attorneys of its choice with respect to the advisability of making this settlement and the release provided herein. This Agreement is based upon such advice, after each party's respective independent attorneys were provided with a full and fair opportunity to review the Agreement and consult with their respective clients regarding the terms contained herein.

(b) Each party entering into this Agreement, and each person executing this Agreement on behalf of any party, has full authority to do so and to make the covenants, promises, representations and warranties set forth herein.

(c) Tempe and Mobil each warrant that they own, and have not assigned, sold, conveyed, or otherwise become dispossessed of any rights, claims or causes of action against the other in relation to any matter covered by this Agreement.

(d) Except as otherwise provided herein, this Agreement is intended to be final and binding upon the parties and is further intended to be effective as a full and final accord and satisfaction among them of the Claims released herein regardless of any claims of fraud, misrepresentation, concealment of fact, mistake of fact or law, duress, coercion, or any other circumstances whatsoever relating to the subject matter of this Agreement. Each party relies upon the finality of this Agreement as a material factor inducing the other party's execution of this Agreement.

(e) There are no other agreements or understandings between the parties relating to the matters and release referred to in this Agreement other than as set forth herein. The mutual obligations and undertakings of the parties expressly set forth in this Agreement are the sole and only consideration of this Agreement, and no representations, promises, or inducements of any nature whatsoever have been made by the parties other than as appear in this Agreement.

(f) Tempe and Mobil, and their respective attorneys have made such investigation of the facts pertaining to the release provided herein as they deem necessary.

(g) The terms of this Agreement are contractual and are the result of negotiation among the parties. Each party has cooperated in the drafting and preparation of this Agreement.

(h) This Agreement has been read carefully by each of the parties and its contents are known and understood by each of the parties. This Agreement is signed freely and voluntarily by each party hereto.

**5. Mediation.** Should a dispute arise between or among the parties regarding this Agreement (except in case of nonpayment of the sum set forth in Term One herein), they will submit the dispute to non-binding mediation. The mediation shall take place in Tempe, Arizona, before a mutually acceptable private judge or mediator with expertise regarding environmental matters. Any party pursuing legal action against any other party relating to the terms of this Agreement, without first pursuing mediation in good faith, shall be denied an award of attorneys'

fees under Paragraph 6, regardless of whether that party is ultimately deemed the prevailing party. The reasonable costs of mediation shall be shared equally between or among the parties involved in the dispute.

**6. Attorneys Fees.** The parties agree to bear their own costs and expenses, including attorneys fees, relating to the Demand Letter, the Claims therein, and/or any litigation that could have been brought arising out of or relating to the Claims. Further, the parties hereto agree that in any dispute relating to or arising from the terms of this Agreement, reasonable fees (including attorneys fees) shall be awarded to the prevailing party as provided under Arizona law.

**7. Further Assurances.** Each party agrees to cooperate in good faith to execute such further documents as may be necessary to effectuate the provisions of this Agreement.

**8. Integration.** This Agreement constitutes a single, integrated written contract expressing the entire agreement between the parties hereto. This Agreement supersedes any prior understandings and agreements among the parties with respect to the subject matter herein.

**9. Notices.** All notices hereunder shall be in writing and shall be sent by personal delivery, or by certified or registered mail, postage prepaid, return receipt requested, or by facsimile transmission with a copy by U.S. mail, to the following addresses:

Tempe: Tempe City Attorney's Office  
P.O. Box 5002  
Tempe, Arizona 85280  
Attn: Charlotte Benson, Esq.

Mobil: ExxonMobil Corporation  
800 Bell Street, 15th Floor  
Houston, Texas 77002  
Attn: Larry W. Lindeen, Esq.  
Legal Department

With a copy to: Chris M. Amantea, Esq.  
McDERMOTT, WILL & EMERY  
2049 Century Park East, Suite 3400  
Los Angeles, California 90067

All notices shall be effective upon the earlier of confirmation of facsimile transmission, personal delivery or receipt of the United States mail return receipt, as set forth above. Each party may change its address or designate a new address for notices hereunder by complying with the terms of notice as set forth in this section.

**10. Enforceability and Severability.** If any court should hold or find any of the provisions of this Agreement void or voidable, such a finding in no way shall affect the

enforcement or validity of the remainder of this Agreement or the particular section in which the provision is located.

**11. Written Modification.** This Agreement shall not be enlarged, modified, or altered except by written agreement signed by the parties.

**12. Counterparts.** This Agreement may be executed in counterparts, each of which shall be deemed to be an original, and all of which shall constitute one and the same instrument. It shall be necessary to account for only one fully executed counterpart in proving this Agreement.

**13. Governing Law.** The parties agree that this Agreement is entered into in Arizona relating to property located in Arizona and, therefore, the law governing this Agreement shall be that of the State of Arizona. The parties agree that any dispute related to this Agreement shall be adjudicated in the courts of Arizona.

**14. Recitals.** The recitals and definitions are hereby incorporated into this Agreement.

**CITY OF TEMPE,  
an Arizona municipal corporation:**

By: \_\_\_\_\_  
Mayor

\_\_\_\_\_  
Date

ATTEST:

\_\_\_\_\_  
City Clerk

APPROVED AS TO FORM

\_\_\_\_\_  
City Attorney

**MOBIL OIL CORPORATION,**  
**a New York corporation:**

By: \_\_\_\_\_

\_\_\_\_\_  
Date

Its: \_\_\_\_\_

**DOYLE ♦ WINTHROP**

A LEGAL PROFESSIONAL CORPORATION

PHOENIX, ARIZONA  
2800 NORTH CENTRAL AVE.  
SUITE 1550  
PHOENIX, ARIZONA 85004  
TELEPHONE: (602) 240-6711  
FACSIMILE: (602) 240-6951

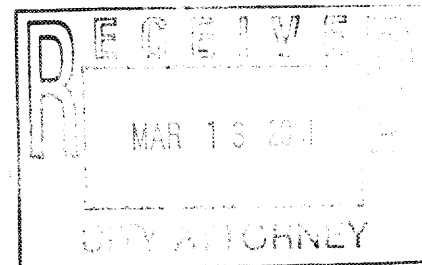
REPLY TO ROGER W.  
STRASSBURG, JR.

LAS VEGAS, NEVADA  
2626 SOUTH RAINBOW BLVD.  
SUITE 101  
LAS VEGAS, NEVADA 89146  
TELEPHONE: (702) 873-1622  
FACSIMILE: (702) 873-2280

September 2, 1999

VIA CERTIFIED MAIL

Lucio A. Noto  
Chief Executive Officer and President  
Mobil Oil Corporation  
3225 Gallows Rd.  
Fairfax, Virginia 22037



Re: Mobil Oil Corporation Station Number 18-MEG, 904 E. Apache  
Boulevard, Tempe, Arizona 85281

Dear Mr. Noto:

Mobil Oil Corporation Service Station, Number 18-MEG, located at 904 E. Apache Boulevard in Tempe, Arizona (the "Site"), is currently interfering with Water Production Well No. 4, owned by the City of Tempe and located near the corner of Apache Boulevard and Rural Road ("Production Well No. 4"). The interference consists of a plume of hydrocarbon contamination in the subsurface soils at the Site and groundwater in the vicinity of the Site. Mobil has already removed over four tons of contamination from the subsurface soils at the Site before stopping remediation, but more contamination remains and continues to spread.

The plume is currently contaminating the groundwater in the capture zone of operation of Production Well No. 4. The contamination consists of benzene (classified as a known carcinogen in humans by U.S.E.P.A.), toluene, ethyl benzene, and xylene. Other contaminants may be present as well.

I represent the City and this letter is a notice of claim. After a description of the material facts and application of Arizona law, this letter invites Mobil to enter into discussions to resolve this matter without litigation as is described in the final paragraph.

The City began installation of Production Well No. 4 in 1956 and it was first used to pump water to the City distribution system in 1962. Production Well No. 4 is currently in good operating condition and has a draw rate of 1180 gallons per minute. The current replacement cost of



Mobil Oil Corporation  
September 2, 1999  
Page 2

such a well is on the order of \$1.5 million. The well was drilled to 500 feet and is open to the water bearing aquifer between 80 feet and 480 feet. Production Well No. 4 is one of six drinking water production wells on which the City must rely for emergency water supplies in the case of system upset, repairs, downtime or drought.

On June 23, 1999, the Governor of Arizona, Hon. Jane Dee Hull, declared a state-wide emergency due to drought and appealed for emergency assistance from the federal government. Arizona's winter 1999 precipitation was the third lowest since 1895. Mountainous regions in Arizona suffered an acute lack of snow pack and snow melt run off, on which the Salt River watershed depends. The City of Tempe depends on that watershed. This year, run off was as low as 30% of normal in some locations.

Salt River Project ("SRP") currently maintains the surface water reservoirs on which the City depends. The SRP water storage reservoirs are currently below average levels. The drought is forcing SRP to use more groundwater than usual to meet its allocations to water users, like the City. SRP usually distributes 3.0 acre-feet of water per acre of land per year. Usually that 3.0 acre-feet per acre consists of 2.7 acre-feet per acre per year of surface water and 0.3 acre-feet per acre per year of groundwater. This year, however, the drought has forced SRP to distribute 2.0 acre-feet per acre per year of stored surface water and 1.0 acre-feet per acre per year of groundwater, three times the usual groundwater pumping by SRP. If SRP responds further to the drought by cutting its distribution to 2.0 acre-feet per acre, the City would be forced to activate its emergency groundwater wells, one of which is Production Well No. 4.

When activated, Production Well No. 4 taps three water-bearing units which also extend beneath the Site: The Upper Alluvial Unit (grade to 160 feet below land surface), the Middle Alluvial Unit (160 feet to 370 feet below grade surface), and the Lower Alluvial Unit (370 feet to 470 feet below grade surface). Saturated conditions begin at a depth of approximately 65 feet below grade surface. Production Well No. 4 is open to the Upper Alluvial Unit from a depth of 80 to 160 feet below grade surface; the Middle Alluvial Unit from a depth of approximately 160 feet to 370 feet; and the Lower Alluvial Unit from a depth of approximately 370 feet to 480 feet. The surface elevation of Production Well No. 4 is approximately the same as that of the Mobil Site. The well is approximately 275 feet north of the Site. The lower two alluvial units are at risk of cross-contamination from the Site in the event that the hydraulic head is lower in the lower two units than in the Upper Alluvial Unit. According to recent computer modeling data submitted by CH2MHill to the U.S.E.P.A. for the Indian Bend Wash Superfund Site, dated August 12, 1998, the Upper Alluvial Unit does flow into the Middle Alluvial Unit, thereby creating the risk of cross contamination of the lower units from contamination in the Upper Alluvial Unit. Thus, cleaning up of the contamination from the Site is a real and present concern to the City.

The Site is currently occupied by a vacant Mobil service station building with two

Mobil Oil Corporation

September 2, 1999

Page 3

service bays, four underground storage tanks ("USTs"), and two unregistered USTs from a former car wash facility not associated with Mobil. The four USTs connected to the service station are currently registered with the Arizona Department of Environmental Quality ("ADEQ"). The registered owner is Mobil Oil Corp., 3225 Gallows Road, Fairfax, Virginia. The registration included three 10,000 gallon gasoline USTs and one 550 gallon waste oil UST.

According to the Notification for Underground Storage Tanks, No. 3239, on file with ADEQ, dated April 21, 1986, Mobil Oil Corporation was also the owner of three USTs at the Site, consisting of two 10,000 gallon USTs, each seventeen years old, and one 6000 gallon UST, ten years old. All three were gasoline product tanks made of steel. These three USTs were replaced in late 1988 due to a suspected leak, according to the Notification for Underground Storage Tanks, No. 3239, dated November 23, 1988.

The release of petroleum hydrocarbon contamination from the USTs registered to Mobil, and related on-site pipelines, has been verified by soil samples taken during excavation of the USTs. Soil samples taken on January 31, 1989, by Mobil's first environmental consultant, EMCON, verified the release of hydrocarbon contamination to the subsurface soils. The two soil samples from the product line trenches (L1 and L2) showed TPH contamination at 2500 mg/kg and 1800 mg/kg, respectively, which exceeded the ADEQ regulatory action limit of 100 mg/kg for TPH. Also, sample SE1 taken at the southeast corner of the UST excavation pit showed TPH at 1700 mg/kg, benzene at 130 µg/kg, and xylene at 118,000 µg/kg. The ADEQ action level for benzene and xylene at the time was 130 µg/kg for benzene and 44,000 µg/kg for benzene.

Mobil Oil Corporation reported the line test failure of the pipelines at the Site to ADEQ by Hazardous Materials Incident Report Form, dated December 29, 1988, Incident No. 88-392. In a teleconference dated January 30, 1989, representatives of Mobil Oil reported to ADEQ that the manager of the service station at the Site had reported losing product from the leaded gasoline pipelines which had failed the line testing at the Site.

Effective September 15, 1989, Arizona incorporated 40 C.F.R. §280.61 to .66 into state law. (A.R.S. §49-1005.H) That federal regulation, as incorporated into Arizona law, obligated Mobil to characterize the extent of contamination, both laterally and vertically, once Mobil received the evidence that contamination had come into contact with groundwater. (40 C.F.R. §280.65). Mobil's nonsatisfaction of the legal duty to characterize the full extent and direction of plume movement would prevent Mobil's later efforts to remediate the plume from being fully effective, as is described below. Once Mobil was in possession of evidence that contamination was in contact with groundwater, Mobil's duty to characterize was triggered under Arizona law, but Mobil did not perform the required characterization of the plume of contamination so as to determine its extent and direction of proliferation.

Mobil Oil Corporation  
September 2, 1999  
Page 4

On November 30, 1989, one sample of groundwater was also taken at the 82 foot level from Boring B-1. The test results showed benzene (7400 µg/l), toluene (9400 µg/l), ethyl benzene (1260 µg/l) and xylenes (8,800 µg/l). The tests showed that the contamination was in contact with the groundwater in 1989 and triggered Mobil's duties to characterize under Arizona law incorporating 40 C.F.R. §280.65.

In September 1990, Mobil switched environmental consultants and replaced EMCOM with Western Technologies Environmental Consultants ("WT") to investigate and attempt to characterize the groundwater contamination at the Site. WT installed four groundwater monitoring wells (MW-1 to MW-4). Analytical results of groundwater samples reported found benzene in all samples with levels greater than the ADEQ aquifer water quality standards in two samples.

WT installed an additional on-site monitoring well during March, 1991 (MW-5), and an off-site monitoring well during January 1992 (MW-6). In March 1992, laboratory analysis of samples from all of the six groundwater monitoring wells showed that petroleum hydrocarbon contamination was present in five of the monitoring wells, including benzene, toluene, ethyl benzene and xylene. Contamination was absent only from the off-site well MW-6. As the plume of contamination continued to move throughout the Upper Alluvial Unit, however, hydrocarbon contamination would be verified in the off-site well (MW-6) as the plume continued to expand laterally and vertically.

Without fully characterizing the extent of contamination and the projected movement of the plume, Mobil went ahead and attempted to remediate the on-site soil and groundwater. During the second quarter of 1992, WT installed four soil ventilation wells (SVW-1 through SVW-4), an on-site soil ventilation system with a catalytic oxidizer and a groundwater remediation system with an air stripper. During April 1992, WT installed a dedicated submersible pump in MW-1 and converted that monitoring well to a groundwater extraction well. In June 1992, the groundwater remediation and soil ventilation systems began operation, but were not able to be operated continuously. During November 1992, MW-4 was also equipped with a dedicated submersible groundwater pump and converted into a groundwater extraction well, too. The system as installed by WT was not fully functional and had to be repaired and upgraded before being put into operation.

In late December, 1992, Mobil switched environmental consultants again, replacing WT with Kleinfelder, which Mobil authorized to take over the responsibilities for the remediation effort at the Site. At that time, neither of the remediation systems was in operation but repairs and upgrades were made by Kleinfelder to put those systems in operation. In April, 1994, Kleinfelder installed two combination soil ventilation and air sparging wells (AS1 and AS2). During February, 1995, an air sparging system was installed and put into operation. During July 1995, the catalytic oxidation unit was disconnected from the soil ventilation system due to low vapor concentration and unabated vapor discharge was authorized by the Maricopa County Air Pollution Control Board.

Mobil Oil Corporation  
September 2, 1999  
Page 5

The groundwater pump and treat system was shut down in January 1996, due to low influent groundwater concentration levels that were caused by submerged well screen intervals. The well screens first submerged in the period of February to April 1992, and have remained submerged thereafter. In February 1996, the soil ventilation and air sparging systems were also shut down. Rather, oxygen release compounds socks were installed in the soil ventilation wells (SVW1 through SVW4) in April 1996. During June 1996, the submersible pumps in monitoring wells MW1 and MW4 were removed. These pumps had been placed in those monitoring wells to convert those wells into ground water extraction wells for use in the groundwater remediation system. In November 1996, the oxygen release compounds socks were removed from the soil ventilation wells and the air sparging system was put back into operation and operated until November 1997.

By letter dated October 15, 1997, ADEQ directed Mobil to stop all remedial activities due to "a change in geometry of the contaminant plume." When the remediation system was shut off, 8,640 pounds of contamination had been removed from the soils and over 13,000,000 gallons of contaminated groundwater had been treated. Still, the contamination remained in the subsurface soils and groundwater and continued spreading.

ADEQ directed Mobil to submit a report characterizing the vertical and lateral extent of the plume within 120 days of receipt of ADEQ's letter. ADEQ informed Mobil that groundwater samples collected from wells are not representative of actual conditions when the well screens are submerged. ADEQ directed Mobil to conduct future groundwater monitoring only when the screened interval of the well intersected the saturated zone.

The screens on monitoring wells MW-1 to MW-6 have remained submerged continuously since 1992, invalidating the monitoring data obtained from those wells. Since much of the hydrocarbon contamination is buoyant and moves with the surface of the saturated zone, the submergence of the well screens in the monitoring wells rendered test results from those wells non-representative of actual contaminant concentration levels. Indeed, Mobil has proposed abandoning groundwater monitoring wells MW-1 through MW-6 and replacing those wells with four new groundwater monitoring on-site wells (MW-7 through MW-10). Mobil has also proposed installation of up to four additional off-site groundwater monitoring wells for purposes of characterizing the plume of groundwater contamination which continues to spread off-site to the south. The submergence of the screens may well have also hindered the ability of the pump and treat system to remediate the groundwater contaminant plume.

The plume, according to reports submitted by Mobil to ADEQ, is spreading both northward towards Production Well No. 4, as well as southward. The main thrust of the plume appears to be southward, but the plume does show that over the years it has encroached northward towards Production Well No. 4. Despite the fact that Production Well No. 4 is located upgradient from the Site, the capture zone from the operation of Production Well No. 4 intersects the Site

Mobil Oil Corporation  
September 2, 1999  
Page 6

causing the interference with the operation of the well.

To verify the interference, the City has engaged the services of an independent expert, Dr. Gary Walter, President, Hydro Geo Chem, Inc., of Tucson, Arizona. Dr. Walter's report is attached hereto as Attachment 1, for your review. Despite that the water from Production Well No. 4 currently tests negative for contamination from the Site, the Site nevertheless interferes with the capture zone of the well under operational conditions, as would be occasioned by drought or other emergency. Dr. Walter concludes that the Mobil Site would probably be intercepted by the capture zone of Production Well No. 4 since 1993, given the probable hydrological conditions in the area of the Site.

Based upon the information submitted by Mobil to ADEQ and Dr. Walter's report, the City's property rights, have, and continue to be, unreasonably interfered with by Mobil's contamination. Despite the fact that the contamination is not yet present in the well, this is due to the fortuity that the well is not currently in operation, being reserved for emergency uses like drought conditions. Yet, any emergency condition would find the City unable to operate the well due to the presence of carcinogenic contamination within the capture zone of the well.

The City has property rights of ownership and full use of the real property composing the well site for Production Well No. 4. Mobil's unreasonable interference with the City's rights to use its property as a municipal water production well is actionable under Arizona law as a nuisance. Arizona law defines a nuisance in accordance with the Restatement (Second) of Torts as "a nontrespassory invasion of another's interest in the private use and enjoyment of land." Armory Park Neighborhood Assoc. v. The Episcopal Community Services in Arizona, 148 Ariz. 1, 4, 712 P.2d 914, 917 (Ariz. 1985) (soup kitchen for homeless constituted nuisance interfering with nearby property owners' residences); Brenteson Wholesale, Inc. v. Arizona Public Service Company, 166 Ariz. 519, 523, 803 P.2d 930, 934 (App. 1990) (reasonable risk of interference by nearby airplanes with power company's transmission lines constituted nuisance even in absence of trespass). The measure of damages recognized for nuisance in Arizona is either the depreciation in fair market value or the cost to repair, at the election of the injured party. Burns v. Jaquays Mining Corporation, 156 Ariz. 375, 379, 752 P.2d 28, 32 (App. 1987). Arizona law also recognizes damages for loss of use and expenses of monitoring (156 Ariz. at 379).

In addition to interference with the City's property rights of utilization of the real property composing the well site, Mobil's contamination has also interfered with the City's property interest in the groundwater itself within the capture zone of Production Well No. 4. Arizona law affords property rights protection to percolating groundwater once captured by the pumping action of Production Well No. 4. Town of Chino Valley v. City of Prescott, 131 Ariz. 78, 638 P.2d 1324 (Ariz. 1982) (en banc). Once the City responds to emergency conditions by commencing operation of Production Well No. 4, a cone of depression forms in the aquifer around the capture zone of the

Mobil Oil Corporation  
September 2, 1999  
Page 7

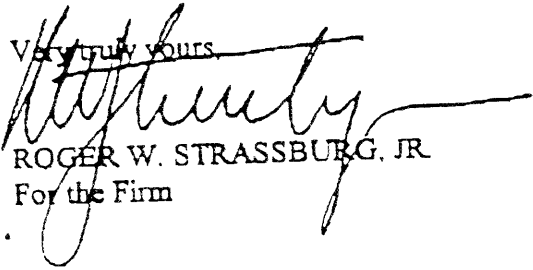
well. The groundwater in the cone of depression in the capture zone is withdrawn from the natural flow of the aquifer and must move to the well screens due to the physical pumping action of the well. The presence of contamination from the Site within the groundwater in the capture zone of the well renders the water unfit to use for the City's purposes and interferes with the City's property rights to that captured groundwater.

Also, Arizona law recognizes a property right in the "usufruct" (right to use) the groundwater which is accessible from the City's real property, but has not yet been reduced to a status of capture by the pumping action of the well. In Town of Chino Valley v. City of Prescott, 131 Ariz. 78, 638 P.2d 1324 (Ariz. 1982)(en banc), the Arizona Supreme Court recognized the right to use uncaptured and unchannelized groundwater. The Supreme Court let stand the lower court's decision to allow a claim for damages for wrongful interference with the usufruct.

There is no statute of limitations bar to the City's claims for nuisance. A.R.S. § 12-510, Tucson Unified School District v. Owens-Corning Fiberglass Corp., 174 Ariz. 336, 849 P.2d 790 (Ariz. 1993) (legal claims of political subdivisions of the state not subject to statute of limitations); Sullivan v. Moore, 49 Ariz. 51, 64 P.2d 809 (Ariz. 1937) (equitable claims not subject to laches). Thus, the plume of carcinogenic contamination from the Site interferes with the City's property right in the real property of the well site, the City's property right in the groundwater once captured and withdrawn from the natural flow by the pumping action of the well, and the City's property right to the usufruct of the unchannelized and uncaptured groundwater in the affected aquifers.

The City is adverse to litigation to resolve its claims regarding Production Well No. 4, if fair and reasonable resolution is possible on a voluntary basis with Mobil. Accordingly, the City hereby offers the opportunity to Mobil to enter into discussions with a view to resolving all of the issues related to the Site. This offer and invitation remains open for thirty days from the date of this letter. The City very much hopes that Mobil will want to discuss the issues raised in this letter on a voluntary basis. If Mobil is interested, please contact the undersigned to make the necessary arrangements. If the City has not heard from Mobil, or its representatives, within the period of this offer, the City will have no choice but to bring a lawsuit to recover damages and equitable relief.

Very truly yours,

  
ROGER W. STRASSBURG, JR.  
For the Firm

RWS/rws

Mobil Oil Corporation  
September 2, 1999  
Page 8

Enclosures

Attachment

1. Report dated August 31, 1999, by Dr. Gary Walter, Hydro Geo Chem.

cc: Prentice Hall Corp. System ✓  
Statutory Agent for Mobil Oil Corporation  
3636 North Central Avenue  
Phoenix, Arizona 85012

Mobil Business Resources Corporation  
Remediation Engineering Department  
1464 Madera Road, Suite N  
Number 265  
Simi Valley, California 93065  
Attention: Harold R. Cramer, President



HYDROGEOLOGY  
CONSULTANTS

August 31, 1999

Roger W. Strassburg, Esq.  
DOYLE & WINTHROP  
2800 North Central Avenue, #1550  
Phoenix, Arizona 85004

Dear Roger,

You asked me to determine if the presence of groundwater contamination on the property known as Mobil Corporation SS#18-MEG (Mobil) located at 904 East Apache, Tempe, Arizona would interfere with use by the City of Tempe (COT) of water production well No. 4 (Arizona Department of Water Resources registration number 55-628166). This letter conveys the results of my evaluation. In performing my analysis, I relied on the documents listed in Exhibit 1 attached to this letter.

COT No. 4 is located approximately 275 feet north of the Mobil property boundary. Three areally extensive water-bearing geologic units are known to exist beneath the Mobil site<sup>1</sup>: the Upper Alluvial Unit (UAU) (land surface to 160 feet below land surface (bls)), the Middle Alluvial Unit (MAU) (160 to 370 feet bls), and the Lower Alluvial Unit (LAU) (370 to 470 feet bls). In 1997, saturated conditions occurred at a depth of approximately 70 feet below land surface (bls) beneath the Mobil site.

Groundwater in the UAU beneath the Mobil site has been reported to be contaminated with petroleum hydrocarbons<sup>2</sup>. The concentrations of petroleum hydrocarbon constituents detected in groundwater samples collected on September 6, 1997 from monitoring wells on the Mobil property are listed in Table 1. These analyses are the most recent that have been provided to me. Also shown in Table 1 are the Arizona Water Quality Standard (AWQS) for each of the constituents reported. Benzene exceeded the AWQS for benzene in seven of the eight samples analyzed. Because the

---

<sup>1</sup>Laney, R.L. and M.E. Hahn. Hydrogeology of the Eastern Part of the Salt River Valley. Arizona Department of Water Resources. Water Resources Investigations 86-4147.

<sup>2</sup>Kleinfelder. Work Plan for Site Characterization. February 1, 1998.

ATTACHMENT 1





Roger W. Strassburg, Esq.

August 31, 1999

Page 2

screened intervals of the monitoring wells were submerged, these analytical results may not be representative of conditions in the aquifer.

Based on my review of reports describing the groundwater conditions at the Mobil site, I have concluded that the vertical and lateral extent of contamination associated with the Mobil site has not been fully determined. The need for further definition of the extent of contamination to the north and east of the Mobil property is further indicated by the locations of new monitoring wells MW-7 and MW-8 proposed in the previously referenced Work Plan for Site Characterization (Kleinfelder, 1998).

Based on drilling logs and well construction reports for COT No. 4, this well is open to the UAU from a depth of 80 to 160 feet bls. The land surface elevation at the location of COT No. 4 is approximately the same as that at the Mobil site, 1170 feet above mean sea level. COT No. 4 is also open to the MAU from a depth of approximately 160 feet to 370 feet bls and to the LAU from a depth of approximately 370 to 470 feet bls. In 1998, the depth to water in COT No. 4 was approximately 65 feet bls.

Based on groundwater elevations reported for monitoring wells at the Mobil site, the direction of groundwater flow in the vicinity of the site has been generally to the south-southeast since 1990 with occasional measurements indicating a northeasterly flow, as indicated in Exhibit 2. The directions of groundwater flow discussed above indicate that under current hydrologic conditions, COT No. 4 is located upstream with respect to groundwater flow at the Mobil site.

The issue as to whether COT No. 4 would draw-in or capture contaminated groundwater underneath the Mobil site was evaluated in two ways. First, a well-accepted analytical model<sup>1</sup> was used to compute the areal extent of the zone over which COT No. 4 well would draw groundwater from the UAU (the capture zone). The capture zone is a function of the transmissivity of the UAU and the underlying water-bearing zones, the background hydraulic gradient in the UAU, and the proportion of the total flow into COT No. 4 provided from the UAU. The maximum downstream extent of the capture zone is defined by a stagnation point that is the furthest distance downstream from the well at which water flows back toward the well. Under steady flow conditions, this point is defined by Bear as:

$$d_s = \frac{Q_w}{2\pi T} \quad (1)$$

---

<sup>1</sup>Bear, J. 1979 *Hydraulics of Groundwater*. McGraw-Hill, New York.

Roger W. Strassburg, Esq.  
August 31, 1999  
Page 3

where  $d_s$  is the distance from the well to the stagnation point [feet]  
 $Q_w$  is the pumping rate from the well coming from the UAU [cubic feet per day]  
 $I$  is the hydraulic gradient [dimensionless]  
 $T$  is the transmissivity of the UAU [square feet per day].

Assuming that the saturated thickness of the UAU does not change significantly as a result of pumping, the time required for the capture zone to expand to a specific distance downstream from the well is given to a reasonable degree of scientific probability by:

$$t_s = \frac{S_y d_s^2}{4T \ln[-Q_w / 2\pi i T d_s]} \quad (2)$$

where  $S_y$  is the specific yield in the case of an unconfined aquifer such as the UAU  
 $\ln$  is the natural logarithm.

A specific yield of 0.10 was assumed for all subsequent calculations.

The combined transmissivity of the UAU, MAU, and LAU penetrated by COT No. 4 was estimated to be 38,000 square feet per day based on analysis of records of pumping and drawdown provided to me by the City of Tempe<sup>4</sup>. The maximum pumping capacity of COT No. 4 is also reported to be 1180 gallons per minute. Exhibit 3 shows the distance to the steady-state stagnation point as a function of the hydraulic gradient in the UAU under non-pumping conditions. These calculations were performed assuming that the flow to the well from each aquifer unit was proportional to the transmissivity of that unit in which case the distance to the stagnation point becomes independent of the transmissivity of the UAU according to equation 1. Also shown on Exhibit 3 are the distances from COT No. 4 to the northern and southern property boundaries of the Mobil site.

Exhibit 3 demonstrates that even in the case when groundwater flow is directly to the south, so that COT No. 4 is directly upstream from the Mobil site, the capture zone of COT No. 4 would reach the northern edge of the Mobil property whenever the hydraulic gradient is less than 0.00346

---

<sup>4</sup>This estimate of the total transmissivity of the water bearing units penetrated by COT No. 4 was based on a Jacob-Cooper semi-logarithmic analysis of the drawdown data.

Roger W. Strassburg, Esq.  
August 31, 1999  
Page 4

depending on the duration of pumping. The capture zone can reach the southern edge of the Mobil property whenever the hydraulic gradient is less than 0.00229 depending on the duration of pumping.

As shown in Exhibit 2, the magnitude of the hydraulic gradient at the Mobil site has varied from a maximum of 0.043 to a minimum of 0.0003. The higher values occurred between late 1990 and mid-1993 when the water table was rapidly rising beneath the site. Between January 1993 and January 1996, the direction of groundwater flow and magnitude of the hydraulic gradient at the Mobil site were influenced by groundwater pumping from monitoring wells MW-1 and MW-4. Since pumping from MW-1 and MW-4 was stopped in 1996, the direction of flow has been to the south-southeast and the magnitude of the hydraulic gradient has averaged 0.0012. As shown in Exhibit 2, the hydraulic gradient at the Mobil site has generally been less than 0.00346 since 1993 even during the time period when remedial pumping was taking place on the Mobil site.

Exhibit 4 shows the time required for the capture zone to reach within 5 feet of the northern and southern edges of the Mobil property for various values of the hydraulic gradient and transmissivity of the UAU<sup>3</sup>. As indicated by Exhibit 4, the capture zone reaches to within 5 feet of the north edge of the Mobil property after no more than 20 days of pumping. It reaches the southern edge of the Mobil property after no more than 70 days of pumping. The times are dependent on the hydraulic gradient. For the average gradient of 0.0012 since 1996, the capture zone would intersect the Mobil property in less than 1 day for the range of transmissivities likely to exist at the site.

The extent of the capture zone of COT No. 4 was also evaluated for average groundwater flow conditions since 1996 using a semi-analytical, particle tracking computer program called WELL2D<sup>6</sup>. To illustrate the areal extent of the capture zone, this program was used to compute the extent of the capture zone after 1, 7, 14, 30, and 90 days of pumping COT No. 4 at a rate of 1180 gpm with the flow rate to COT No. 4 from the UAU being proportional to the transmissivity of the UAU. The calculations were performed for a combined transmissivity of the UAU, MAU, and LAU of 38,000 square feet per day and a UAU transmissivity of 12,000 square feet per day. This transmissivity value was chosen as a reasonable estimate of the transmissivity of the UAU based on the combined transmissivity of 38,000 square feet per day and a review of the lithologic descriptions of the aquifer units penetrated by COT No. 4. The direction of groundwater flow and the hydraulic

---

<sup>3</sup>Based on the mathematical form of equation (2), the time dependent stagnation point approaches its steady-state location asymptotically. The time to reach within 5 feet of the steady-state location was selected as a reasonable basis for representing the time required for the capture zone to intersect the Mobil property.

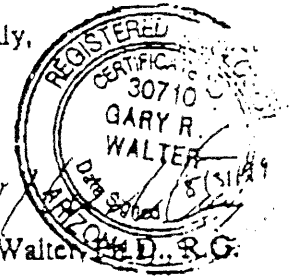
<sup>6</sup>WELL2D is based on well-accepted numerical procedures that were peer reviewed and described in Philip, R.D. and G.R. Walter, 1992. Prediction of Flow and Hydraulic Head Fields for Vertical Circulation Wells. Ground Water, 30(5), 765-773.

Roger W. Strassburg, Esq.  
August 31, 1999  
Page 5

gradient used were the average values at the Mobil site since 1996. Exhibits 5 through 9 show the results of these calculations and illustrate that under the above conditions, the Mobil site is intercepted by the capture zone of COT No. 4 within 1 day.

Based on the scientific calculations described above, it is my opinion that contaminated groundwater at the Mobil site would probably be intercepted by the capture zone of COT No. 4 within 3 days of pumping given the average groundwater conditions that have existed since 1993.

Yours truly,



Gary R. Walter, P.E., R.G.  
President

Attachments (10)

Table 1: Results of September 6, 1997 Groundwater Monitoring at the Mobil Site

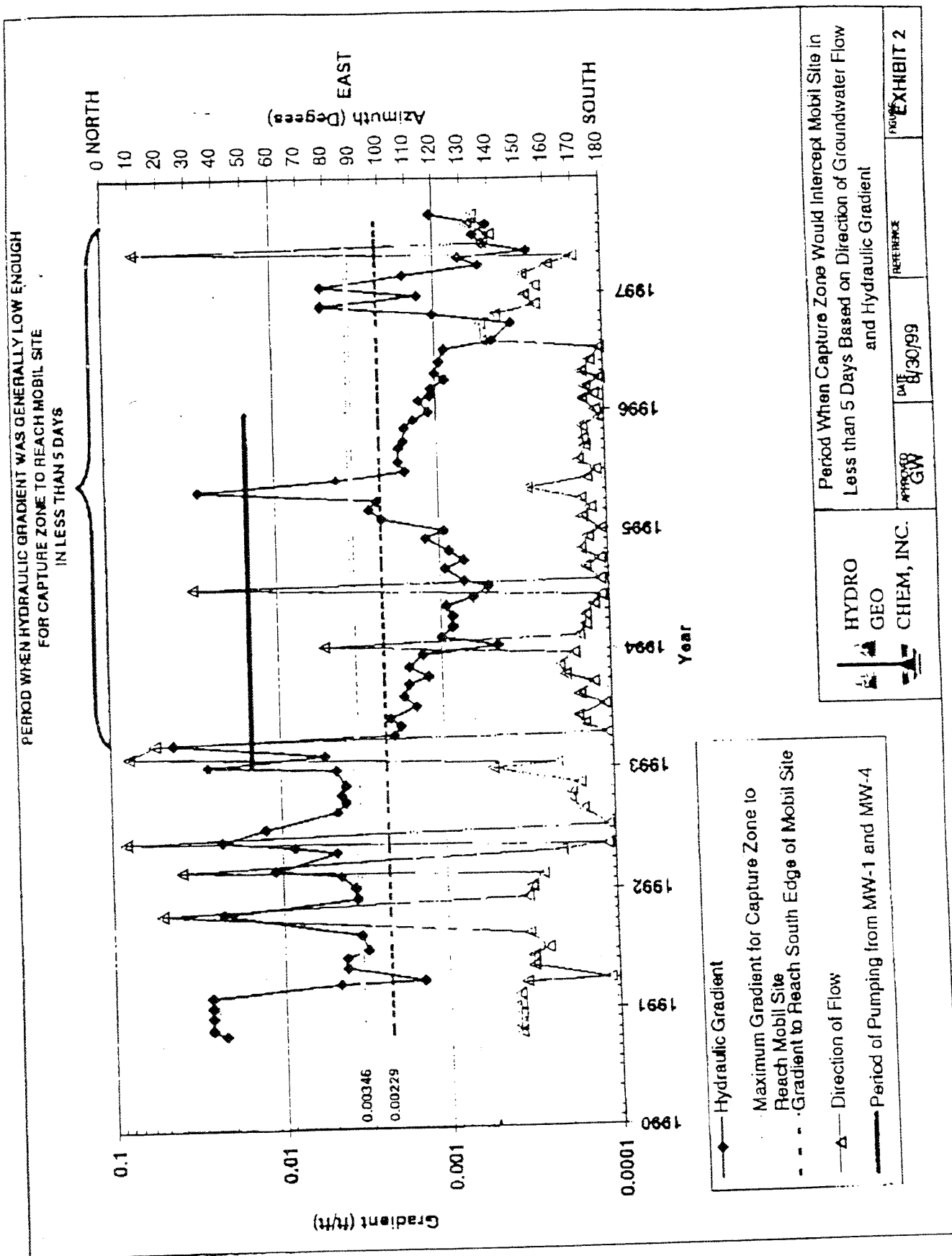
Well	Date Monitored/ Sampled	TRPH (mg/l)	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Total Xylenes (µg/L)
MW-1	09/06/97	4.7	520	<25	140	<195
MW-2	09/06/97	<1.0	38	2.6	12	<8.2
MW-3	09/06/97	2.2	450	30	130	179
MW-4	09/06/97	<1.0	44	2.7	5.8	<11.8
MW-5	09/06/97	1.4	47	17	39	223
MW-6	09/06/97	<1.0	<0.50	<0.50	<0.50	<1.0
Arizona Water Quality Standard		N/A	5	1000	700	10000

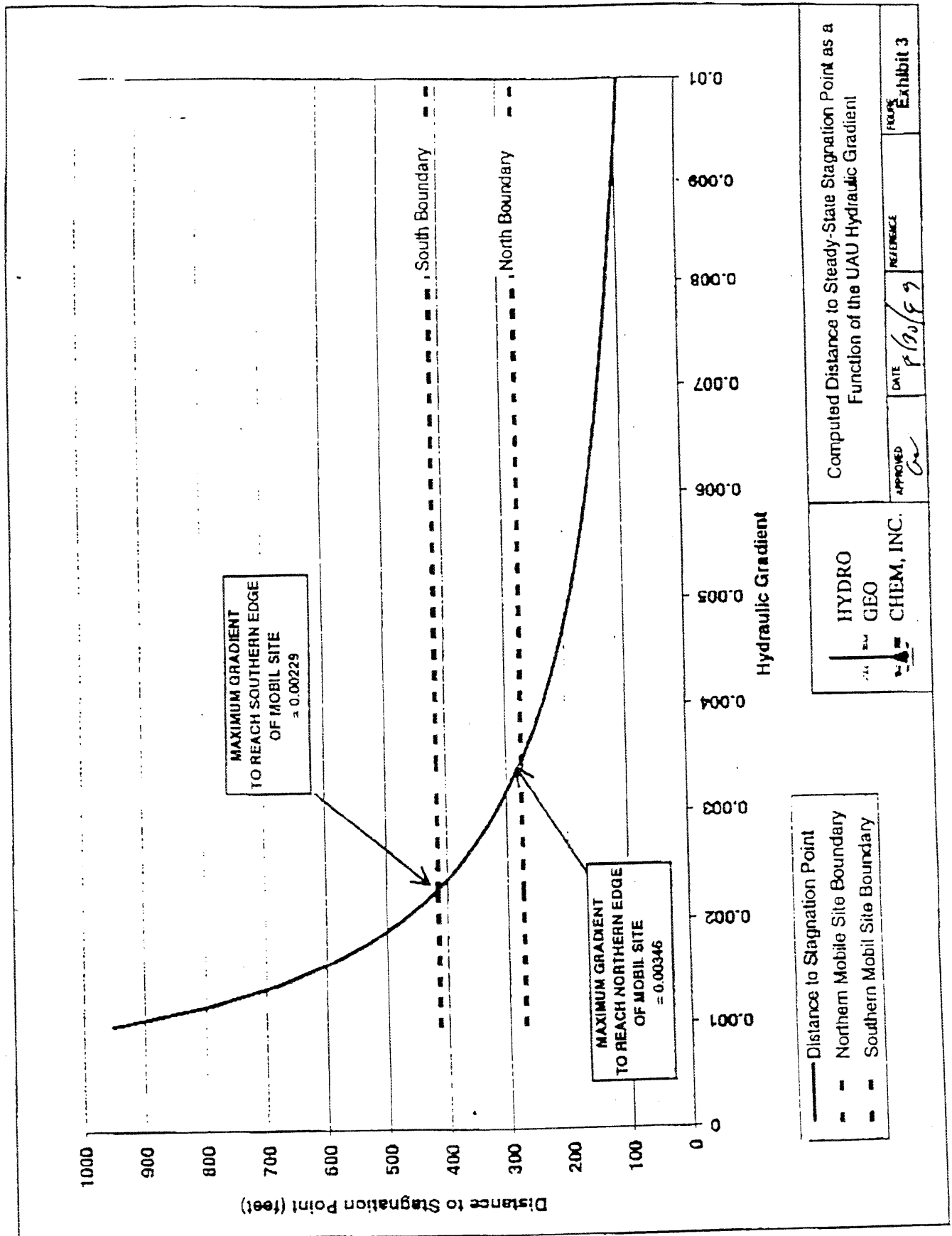
N/A = Not standard has been established  
TRPH = Total Recoverable Petroleum Hydrocarbons

Note: MW indicates a monitoring well constructed for the purpose of collecting groundwater samples. At the time these samples were collected the screened interval of each of these wells was fully submerged so that the analyses of these samples may not be representative of conditions in the aquifer. SVW indicates a well installed for the purpose of performing soil vapor extraction. Water samples were collected from those soil vapor extraction wells in which the water table had risen into the screened interval.

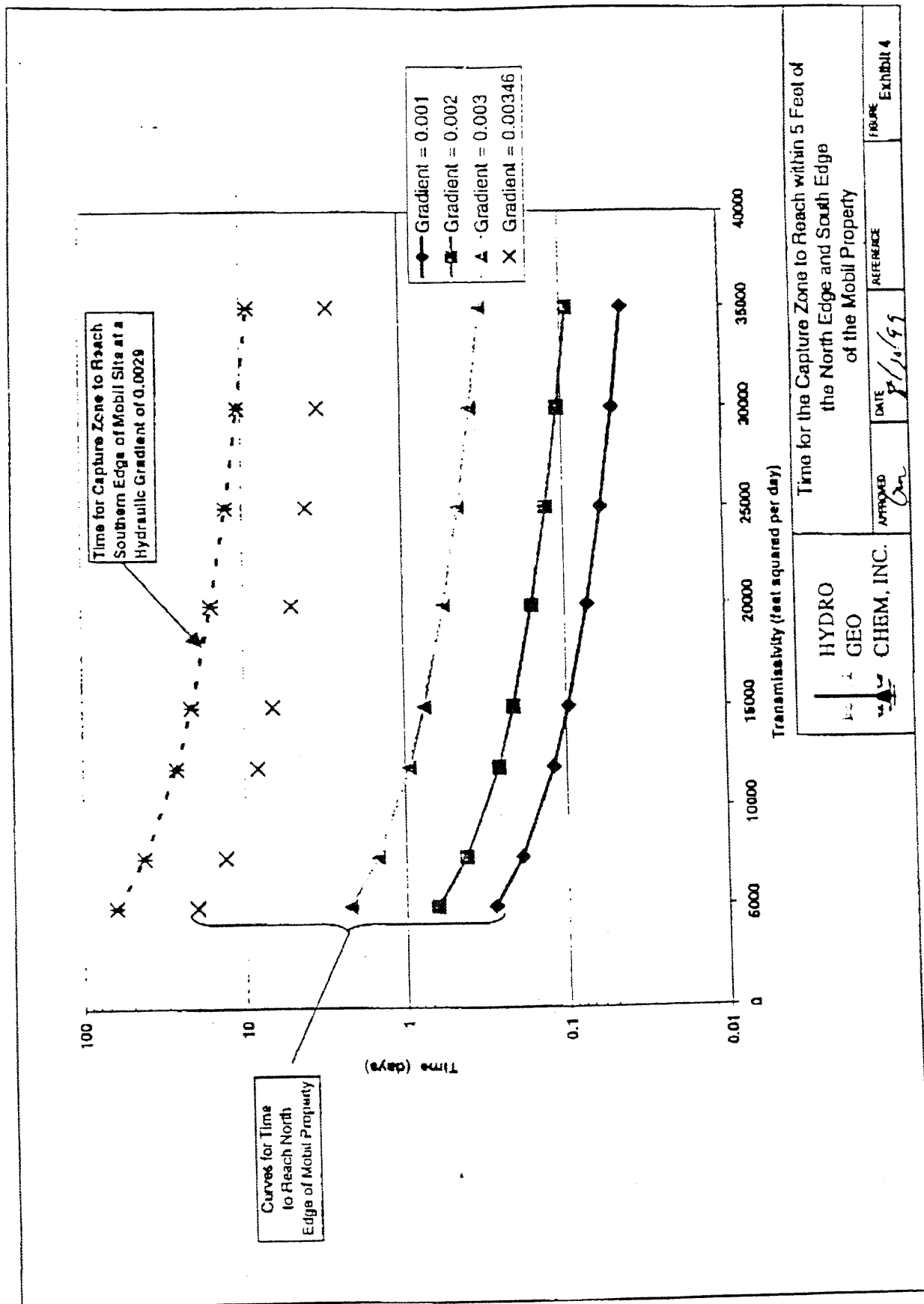
## Exhibit 1: Documents Relied On

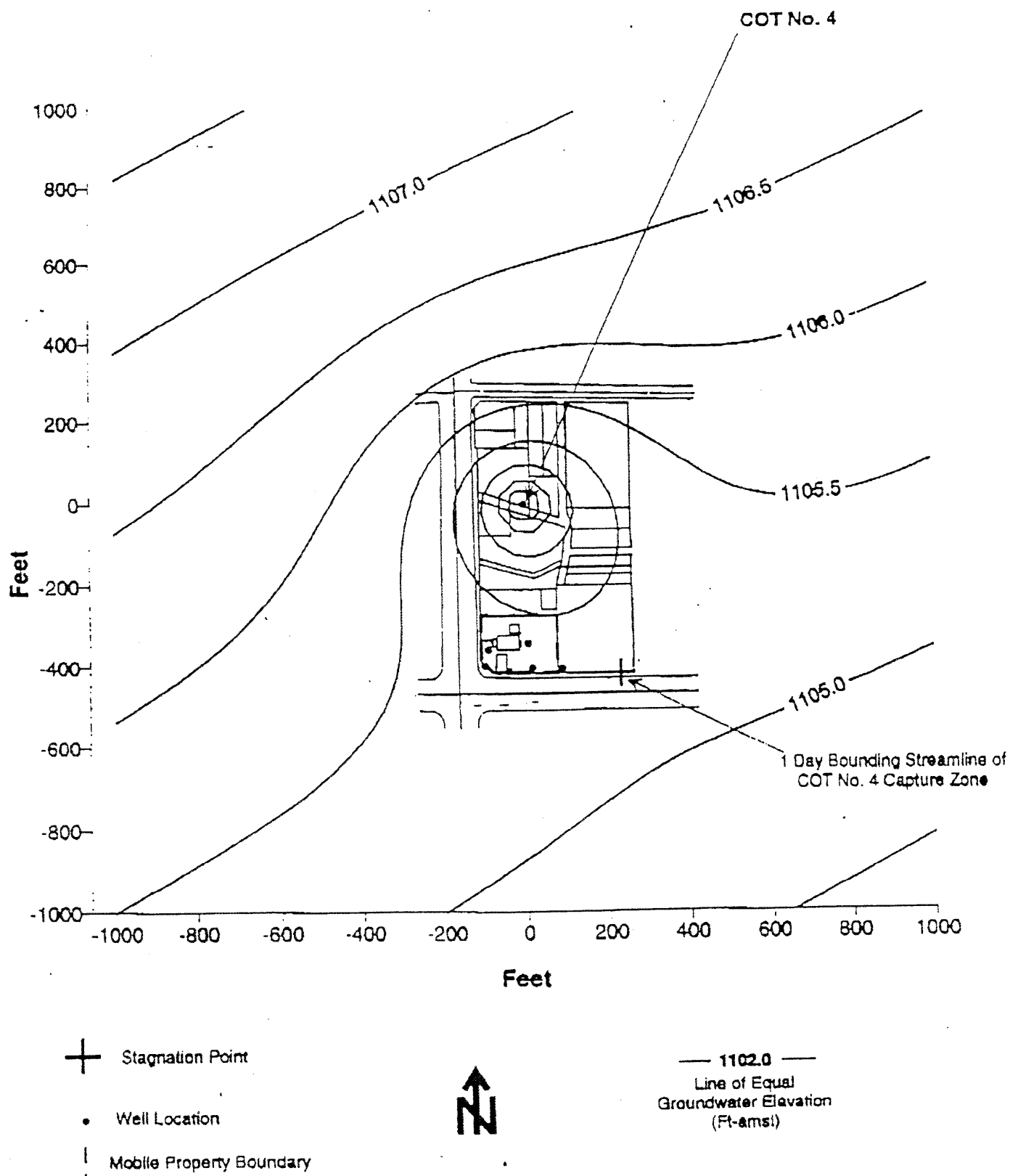
Report Title	Date	Author
Phase III Site Assessment Mobil Station #18-MEG	1/1/90	EMCON
Groundwater Assessment Work Plan for Mobil Station 18-MEG	6/12/90	Western Technologies
Groundwater Assessment Work Plan for Mobil Station 18-MEG	7/10/90	Western Technologies
Revised Groundwater Assessment Report, Mobil Station 18-MEG	11/5/90	Western Technologies
Status Report, Quarterly Sampling and Groundwater Monitoring Well Installation Mobil Station #18-MEG	5/21/90	Western Technologies
Final Quarterly Report, On-Site Groundwater Assessment Mobil Station #18-MEG	10/14/91	Western Technologies
4th Quarter 1991 Groundwater Assessment	12/27/91	Western Technologies
1st Quarter 1992 Report	4/30/92	Western Technologies
2nd Quarter 1992 Quarterly Monitoring Report	7/29/92	Western Technologies
3rd Quarter 1992 Quarterly Monitoring Report	10/30/92	Western Technologies
Quarterly Groundwater Monitoring Report	3/1/93	Kleinfelder
Quarterly Groundwater Monitoring Report	5/1/93	Kleinfelder
Letter from Mobil to ADEQ	7/23/93	Kleinfelder
3rd Quarter Groundwater Monitoring Report	10/1/93	Kleinfelder
Quarterly Groundwater Monitoring Report (10/93-12/93)	2/1/94	Kleinfelder
1st Quarter 1994 Quarterly Groundwater Monitoring Report	6/1/94	Kleinfelder
Report of Air Sparging/Soil Ventilation Well Installation	6/1/94	Kleinfelder
2nd Quarter 1994 Quarterly Groundwater Monitoring Report	8/1/94	Kleinfelder
3rd Quarter 1994 Quarterly Monitoring Report	1/1/95	Kleinfelder
Fourth Quarter 1994 Groundwater Monitoring Report	3/1/95	Kleinfelder
First Quarter 1995 Groundwater Monitoring Report	5/1/95	Kleinfelder
Letter from Kleinfelder to ADEQ (UST Section)	10/31/95	Kleinfelder
Letter from Kleinfelder to ADEQ (UST Section)	11/21/95	Kleinfelder
Letter from Kleinfelder to ADEQ (UST Section)	1/30/96	Kleinfelder
Letter from Kleinfelder to ADEQ (UST Section)	5/8/96	Kleinfelder
Letter from Kleinfelder to ADEQ (UST Section)	8/12/96	Kleinfelder
Third Quarter 1996 Groundwater Monitoring Report	11/13/96	Kleinfelder
Letter from Kleinfelder to ADEQ (UST Section)	2/18/97	Kleinfelder
Letter from Kleinfelder to ADEQ (UST Section)	7/31/97	Kleinfelder
Letter from Kleinfelder to ADEQ (UST Section)	10/31/97	Kleinfelder
Work Plan for Site Characterization	2/1/98	Kleinfelder
Well Construction and Drilling Log COT#4		City of Tempe
COT Well #4 Drawdown Test Data	3/6/96	City of Tempe
City of Tempe Well Siting Study	3/10/97	Brown & Caldwell
Hydrogeology of the Eastern Part of the Salt River Valley	1986	Laney, R.L. and M.E. Hahn











**HYDRO  
GEO  
CHEM, INC.**

**CAPTURE ZONE EXTENT AND HYDRAULIC HEAD DISTRIBUTION  
AFTER 1 DAY**

Approved

*Gr*

Date

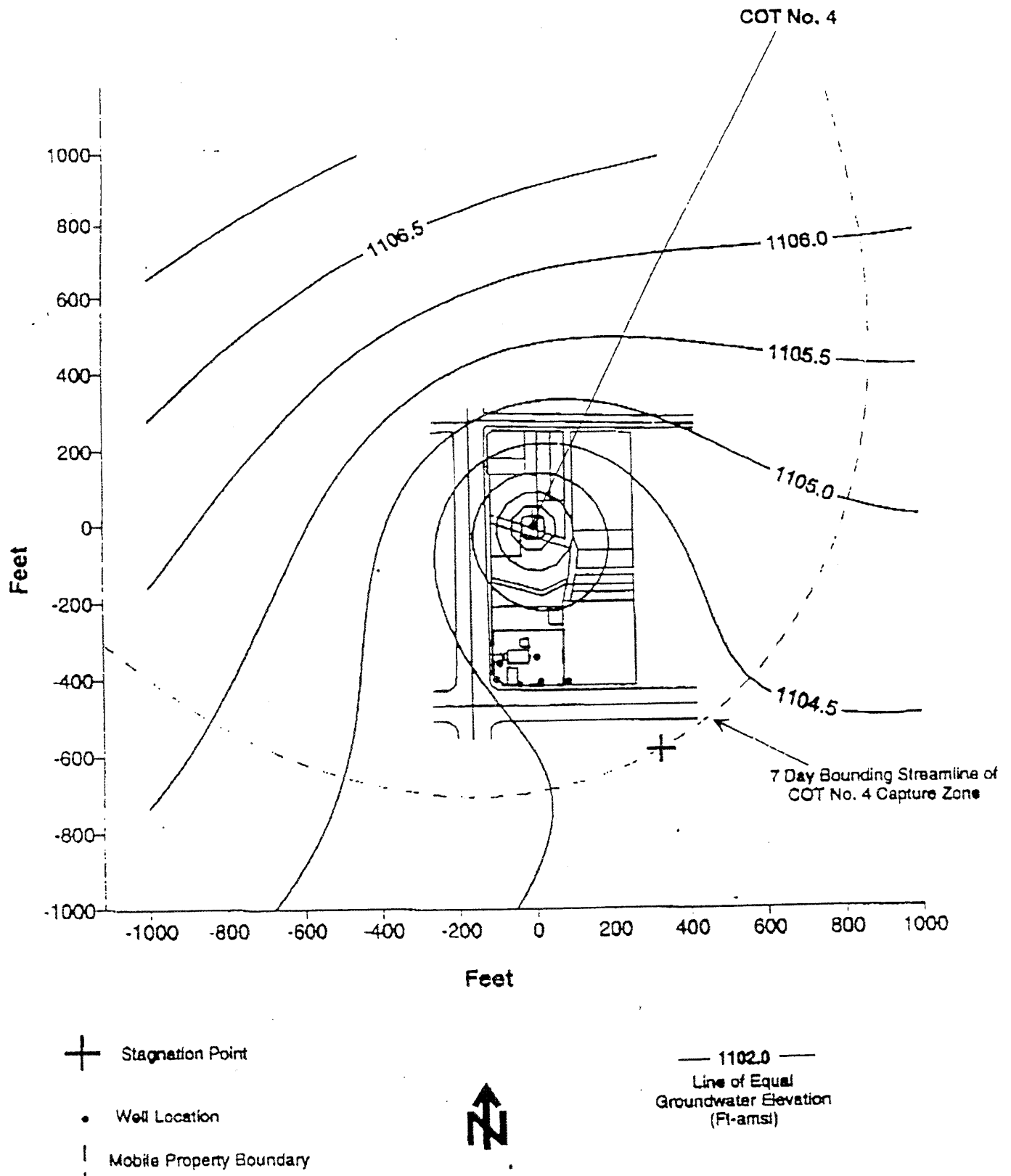
8/30/99

Reference

H:71100, Exhibit\_A.sff

Figure

EXHIBIT 5



**HYDRO  
GEO  
CHEM, INC.**

**CAPTURE ZONE EXTENT AND HYDRAULIC HEAD DISTRIBUTION  
AFTER 7 DAYS**

Approved

*[Signature]*

Date

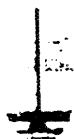
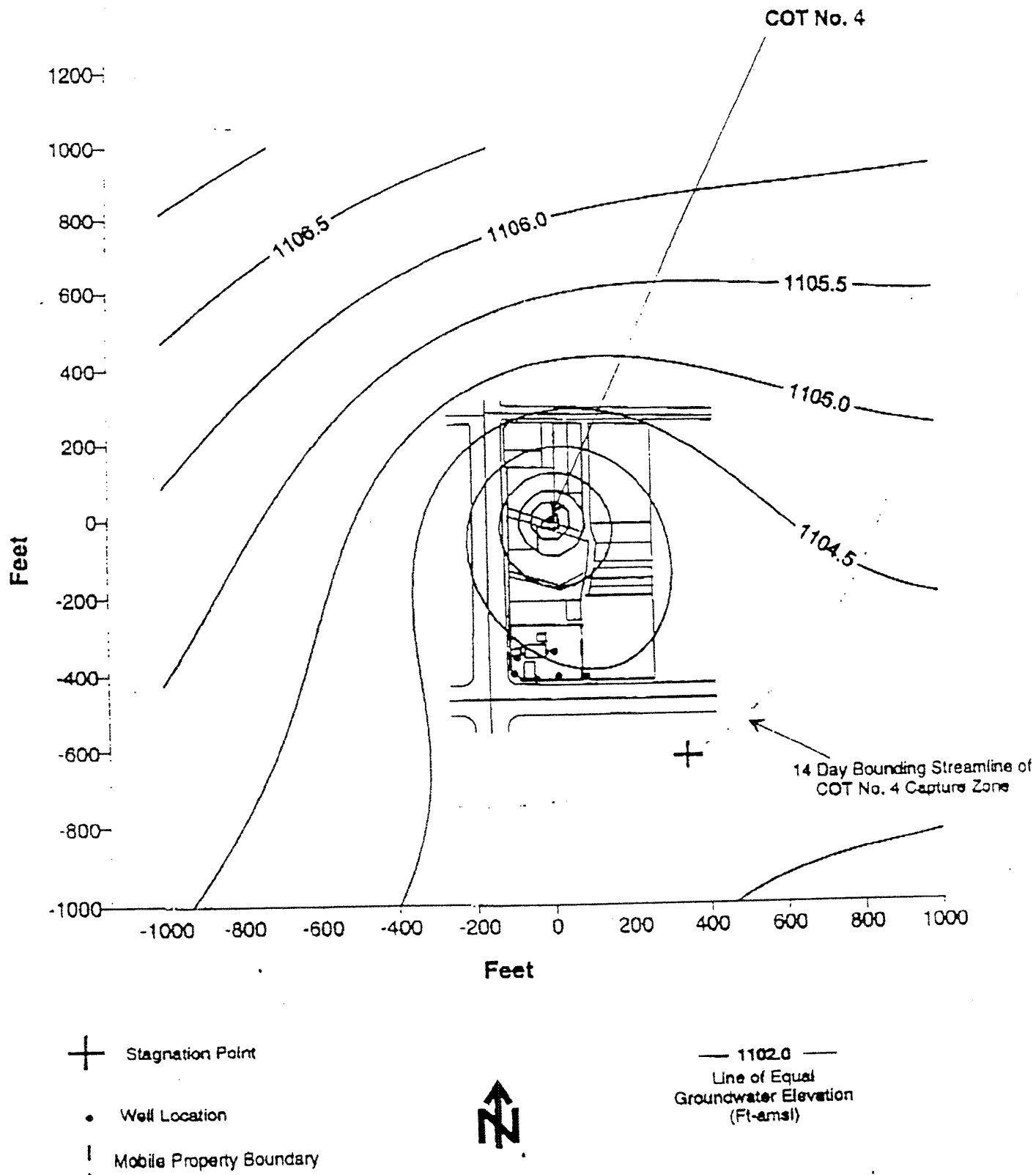
6/30/99

Reference

H:71100, Exhibit\_B.srt

Figure

EXHIBIT 8



**HYDRO  
GEO  
CHEM, INC.**

**CAPTURE ZONE EXTENT AND HYDRAULIC HEAD DISTRIBUTION  
AFTER 14 DAYS**

Approved

*Em*

Date

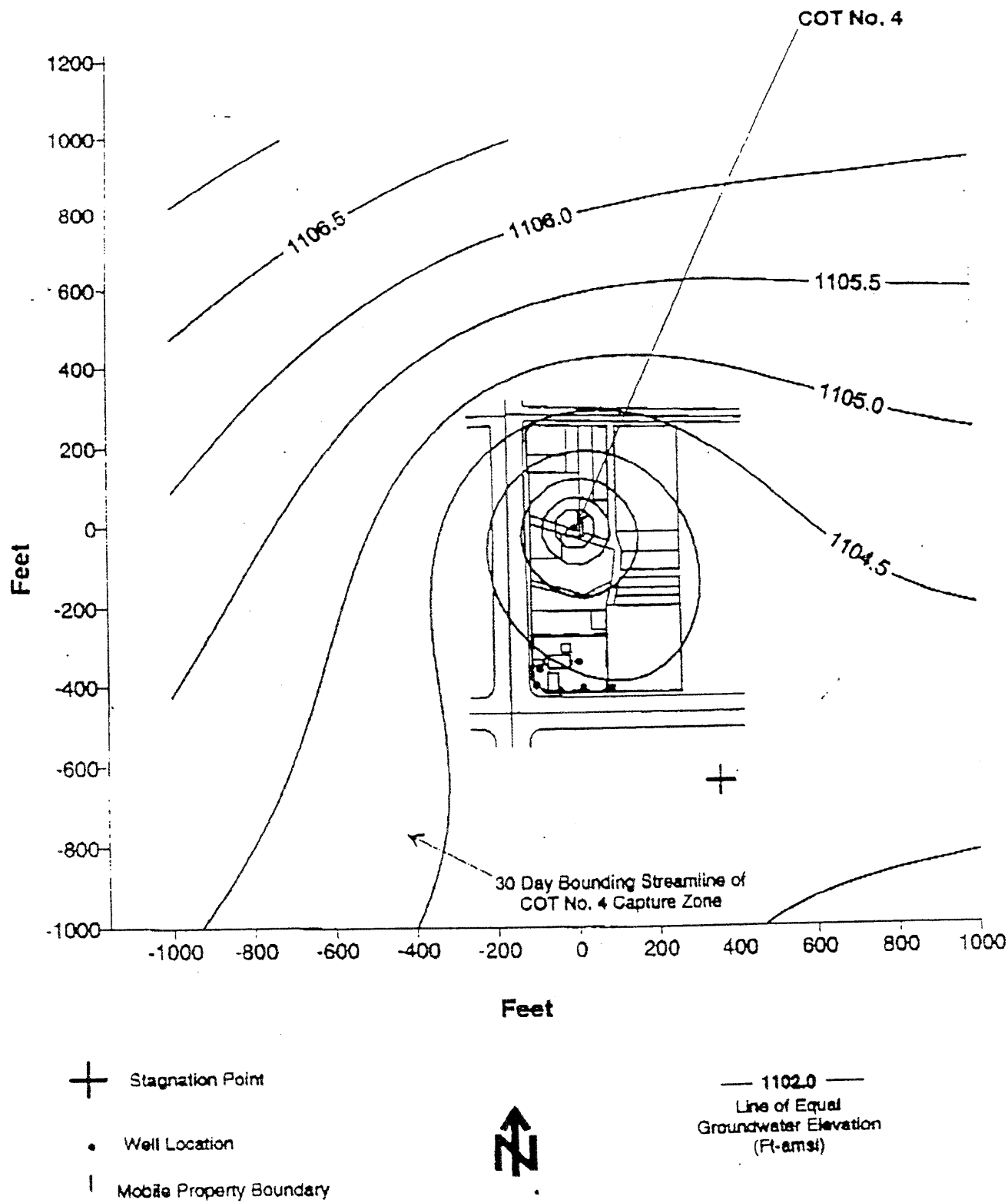
8/30/99

Reference

H:71100, Exhibit\_C.stn

Figure

EXHIBIT 7



HYDRO  
GEO  
CHEM, INC.

CAPTURE ZONE EXTENT AND HYDRAULIC HEAD DISTRIBUTION  
AFTER 30 DAYS

Approved

*Gw*

Used

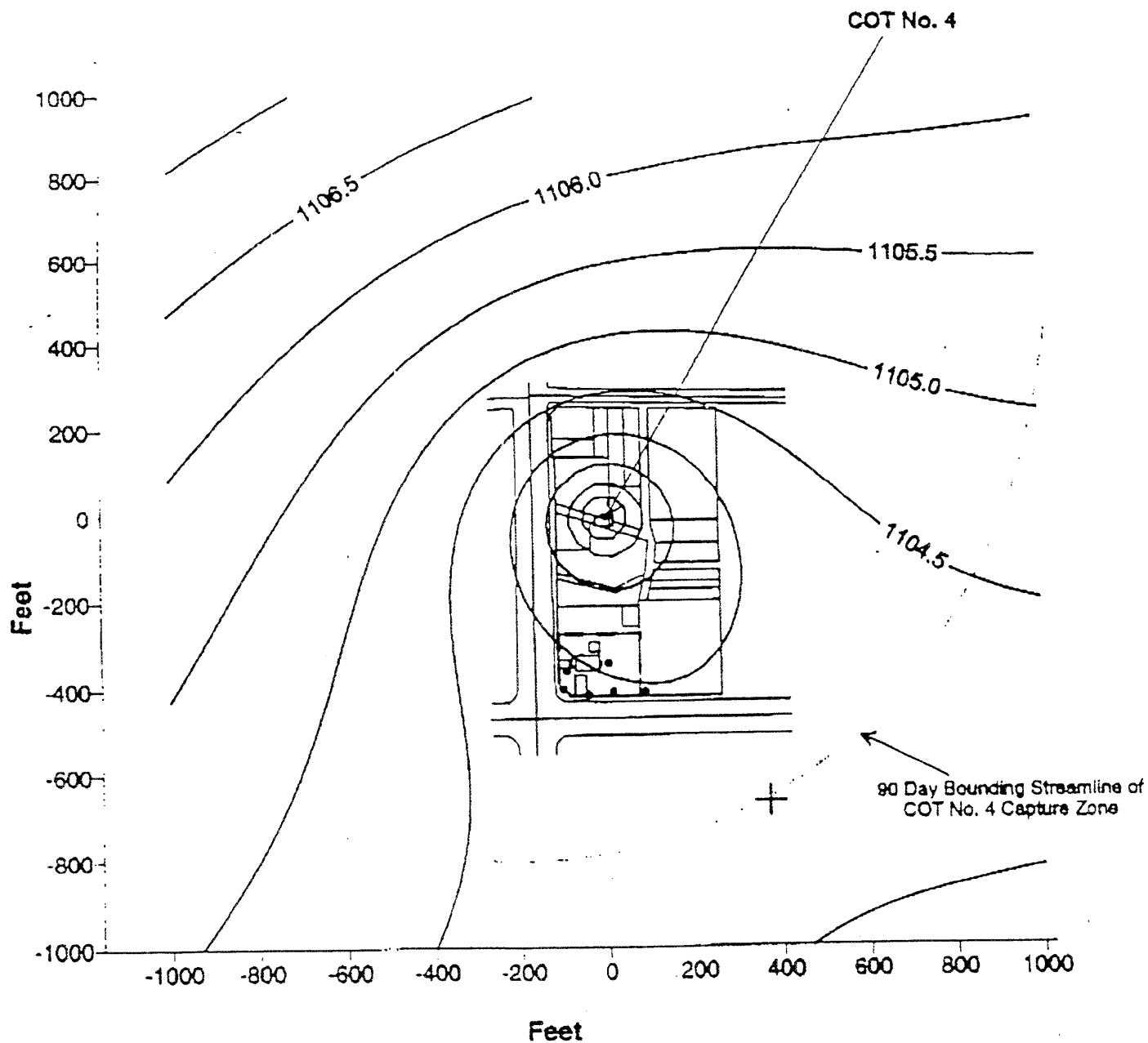
8/30/99

Reference

H:71100, Exhibit\_D.sm

Figure

EXHIBIT 8



HYDRO  
GEO  
CHEM, INC.

# CAPTURE ZONE EXTENT AND HYDRAULIC HEAD DISTRIBUTION AFTER 90 DAYS

Approved

Gr

Date

8/31/99

Reference

H:71100, Exhibit\_E.sff

Figure

EXHIBIT 9